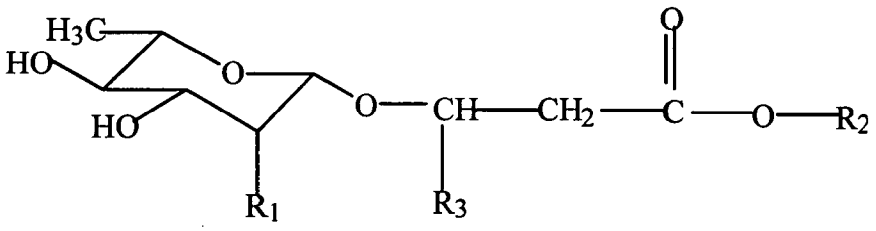
IN THE CLAIMS

This listing of Claims will replace all prior versions and listings of Claims in the application:

1. (Original) A method for the re-epithelization of skin tissue, comprising:

applying to an area of skin in need thereof, an effective re- epithelization amount of a composition comprising one or more rhamnolipids of Formula 1



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α-L-rhamnopyranosyl substituted at the 2 position with a group of formula -O-C(=O)-CH=CH-R^5, or -O-C(=O)-CH=CH-R^5;

R^2 = H, lower alkyl, -CHR_4-CH_2-COOH or -CHR_4-CH_2-$COOR^6$;

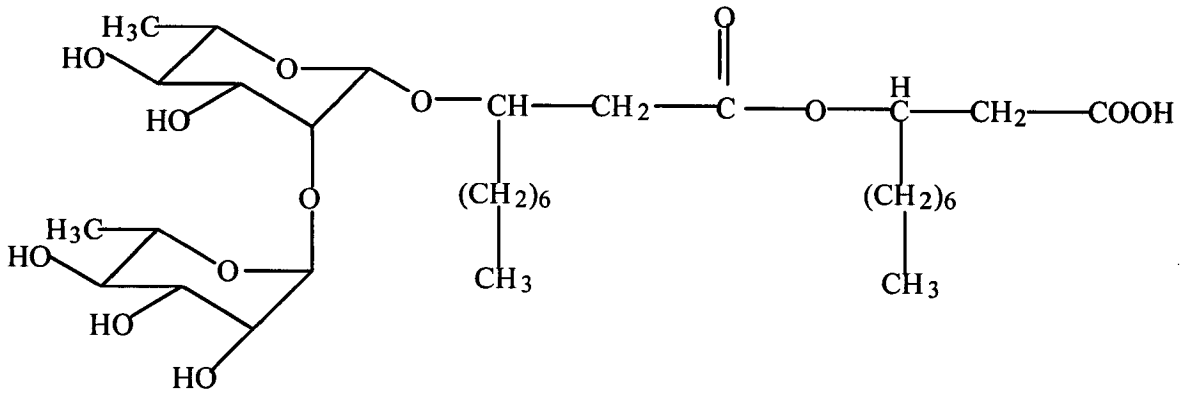
R^3 = -$(CH_2)_x$-CH_3, wherein x = 4-19;

R^4 = -$(CH_2)_y$-CH_3, wherein y = 1-19;

R^5 = $(CH_2)_z$-CH_3, wherein z = 1-12; and

R^6 = lower alkyl.

2. The method as claimed in claim 1, where said rhamnolipid of Formula I is is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



3. (Original) The method as claimed in claim 1, wherein said one or more rhamnolipids of Formula 1 are selected from the group consisting of compounds of Formula 1 wherein:

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -COOH, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

4. (Original) The method as claimed in claim 1, wherein said composition is in a form selected from the group consisting of neat liquid, suspensions, dispersions, emulsions, creams, tinctures, powders, ointments and lotions.

5. (Original) The method as claimed in claim 4, wherein said composition is an ointment.

6. (Original) The method as claimed in claim 5, wherein said ointment comprises said one or more rharnnolipids of Formula I in a matrix of eucerin.

7. (Original) The method as claimed in claim 1, wherein said composition comprises from 0.001 to 5.0% by weight of said one or more rhamnolipids of Formula 1, based on total weight of the composition.

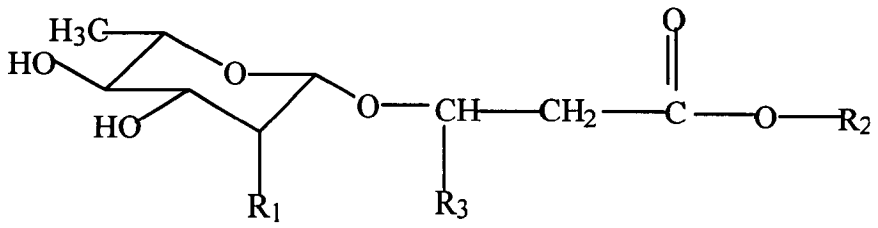
8. (Original) The method as claimed in claim 7, wherein said one or more rhamnolipids are present in said composition in an amount of from 0.01 to 1% by weight, based on total weight of the composition.

9. (Original) The method as claimed in claim 1, wherein said composition is applied for a period of time sufficient to effect wound healing.

10. (Original) The method as claimed in claim 1, wherein said area of skin in need thereof is an open wound selected from the group consisting of bed sores, fistulas, diabetic wounds, irradiation wounds, wounds caused by thermal and nuclear disasters, puncture wounds and incision wounds.

11. (Original) A method for treatment of burn shock, comprising:

administering to a patient in need thereof, an effective amount of a composition comprising one or more rhamnolipids of Formula 1:



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α-L-rhamnopyranosyl substituted at the 2 position with a group of formula -O-C(=O)-CH=CH-R^5, or -O-C(=O)-CH=CH-R^5;

R^2 = H, lower alkyl, -CHR_4-CH_2-COOH or -CHR_4-CH_2-$COOR^6$;

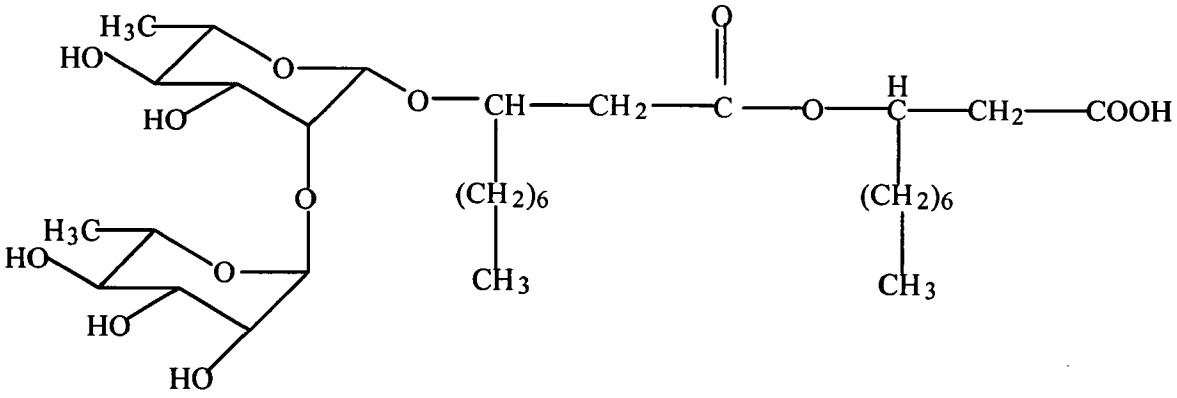
R^3 = -$(CH_2)_x$-CH_3, wherein x = 4-19;

R^4 = -$(CH_2)_y$-CH_3, wherein y = 1-19;

R^5 = $(CH_2)_z$-CH_3, wherein z = 1-12; and

R^6 = lower alkyl.

12. (Original) The method as claimed in claim 11, where said rhamnolipid of Formula I is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



13. (Original) The method as claimed in claim 11, wherein said one or more rhamnolipids of Formula I are selected from the group consisting of compounds of Formula I wherein:

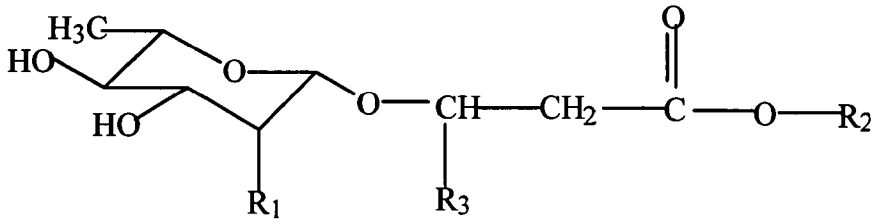
R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -COOH, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

14. (Original) A method for the prevention and treatment of atherosclerosis, comprising: administering to a patient in need thereof, an effective amount of a composition comprising one or more rhamnolipids of Formula 1:



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α.-L-rhamnopyranosyl substituted at the 2 position with a group of formula -O-C(=O)-CH=CH-R^5, or -O-C(=O)-CH=CH-R^5;

R^2 = H, lower alkyl, -CHR_4-CH_2-COOH or -CHR_4-CH_2-$COOR^6$;

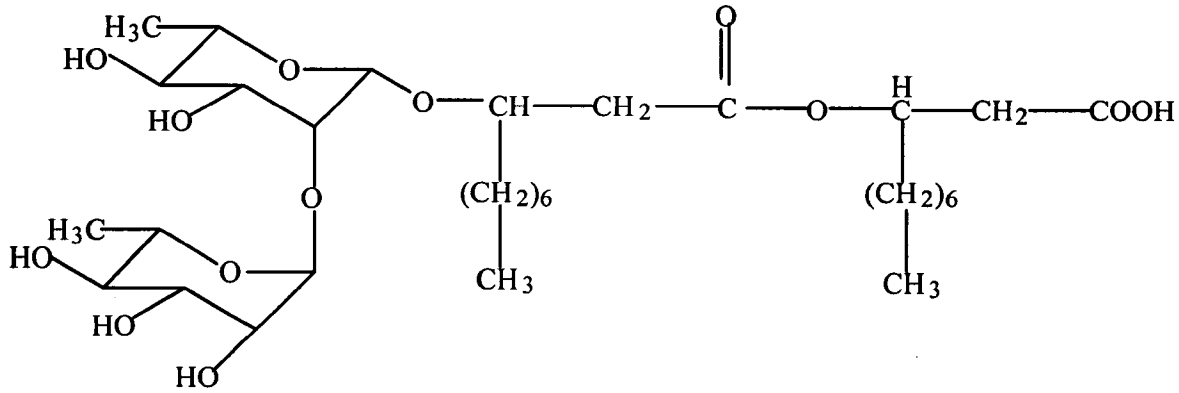
R^3 = -$(CH_2)_x$-CH_3, wherein x = 4-19;

R^4 = -$(CH_2)_y$-CH_3, wherein y = 1-19;

R^5 = $(CH_2)_z$-CH_3, wherein z = 1-12; and

R^6 = lower alkyl.

15. (Original) The method as claimed in claim 14, where said rhamnolipid of Formula I is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



16. (Original) The method as claimed in claim 14, wherein said one or more rhamnolipids of Formula I are selected from the group consisting of compounds of Formula I wherein:

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -COOH, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

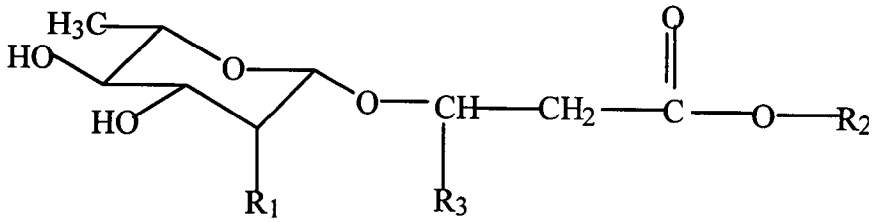
R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

17. (Original) A method for the treatment of depression, comprising:

administering to a patient in need thereof, an effective amount of a composition comprising one or more rhamnolipids of Formula 1:



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α.-L-rhamnopyranosyl substituted at the 2 position with a group of formula $-O-C(=O)-CH=CH-R^5$, or $-O-C(=O)-CH=CH-R^5$;

R^2 = H, lower alkyl, $-CHR_4-CH_2-COOH$ or $-CHR_4-CH_2-COOR^6$;

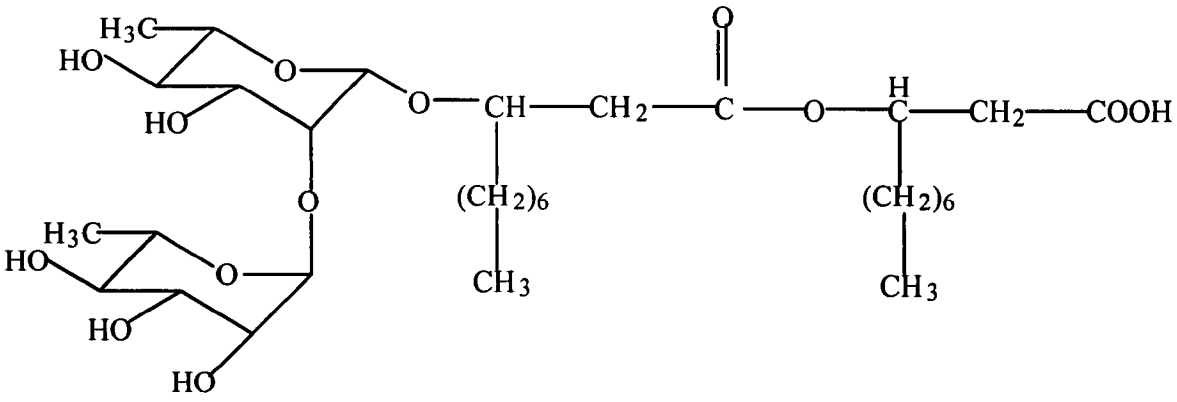
R^3 = $-(CH_2)_x-CH_3$, wherein x = 4-19;

R^4 = $-(CH_2)_y-CH_3$, wherein y = 1-19;

R^5 = $(CH_2)_z-CH_3$, wherein z = 1-12; and

R^6 = lower alkyl.

18. (Original) The method as claimed in claim 17, where said rhamnolipid of Formula 1 is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



19. (Original) The method as claimed in claim 17, wherein the one or more rhamnolipids of Formula 1 are selected from the group consisting of compounds of Formula 1 wherein:

R^1 = $-O-C(=O)-CH = CH-R_5$, R^2 = $-CHR_4-CH_2$ $-COOH$, R^3 = $-(CH_2)_6-CH_3$, R^4 = $-(CH_2)_2-CH_3$, and R^5 = $-(CH_2)_6-CH_3$;

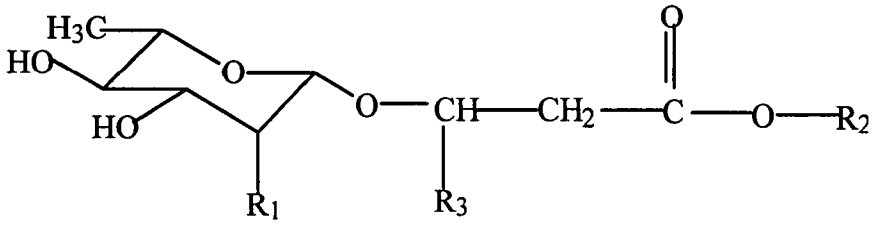
R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

20. (Original) A method for treatment of schizophrenia, comprising:

administering to a patient in need thereof, an effective amount of a composition comprising one or more rhamnolipids of Formula 1:



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α-L-rhamnopyranosyl substituted at the 2 position with a group of formula -O-C(=O)-CH=CH-R_5, or -O-C(=O)-CH=CH-R_5;

R^2 = H, lower alkyl, -CHR_4-CH_2-COOH or -CHR_4-CH_2-$COOR_6$;

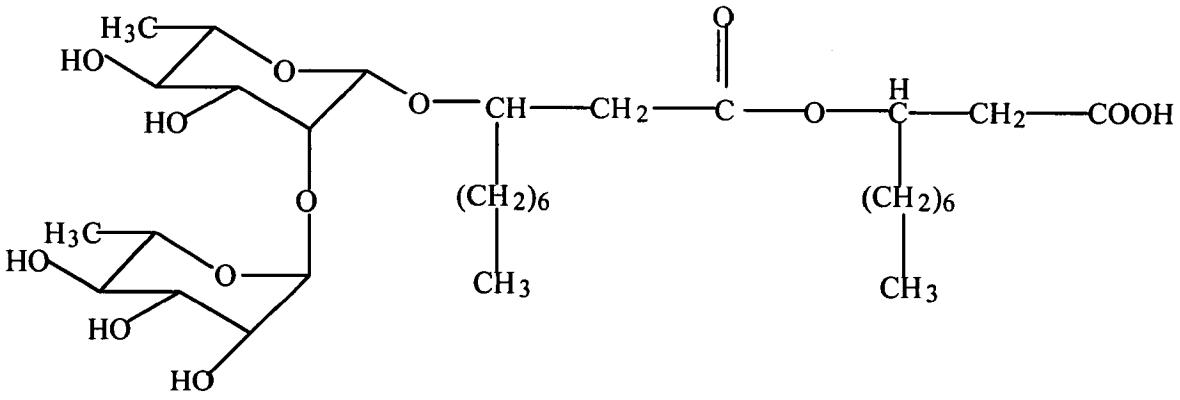
R^3 = -$(CH_2)_x$-CH_3, wherein x = 4-19;

R^4 = -$(CH_2)_y$-CH_3, wherein y = 1-19;

R^5 = $(CH_2)_z$-CH_3, wherein z = 1-12; and

R^6 = lower alky.

21. (Original) The method as claimed in claim 20, where said rhamnolipid of Formula I is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



22. (Original) The method as claimed in claim 20, wherein said one or more rhamnolipids of Formula I are selected from the group consisting of compounds of Formula I wherein:

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -COOH, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

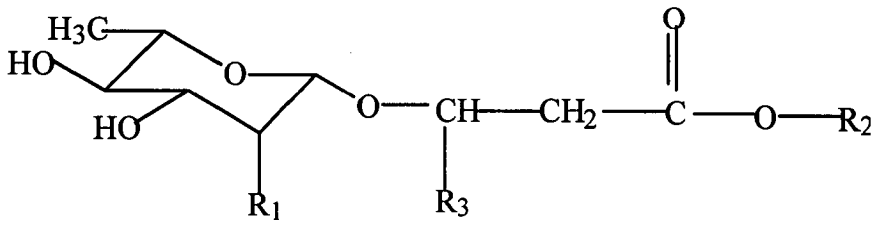
R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

23. (Original) A method for the prevention and treatment of rejection of organ transplants, comprising:

administering to a patient in need thereof, an effective amount of a composition comprising one or more rhamnolipids of Formula 1:



wherein R^1 = H, unsubstituted α-L-rhamnopyranosyl, α-L-rhamnopyranosyl substituted at the 2 position with a group of formula -O-C(=O)-CH=CH-R^5, or -O-C(=O)-CH=CH-R^5;

R^2 = H, lower alkyl, -CHR_4-CH_2-COOH or -CHR_4-CH_2-$COOR^6$;

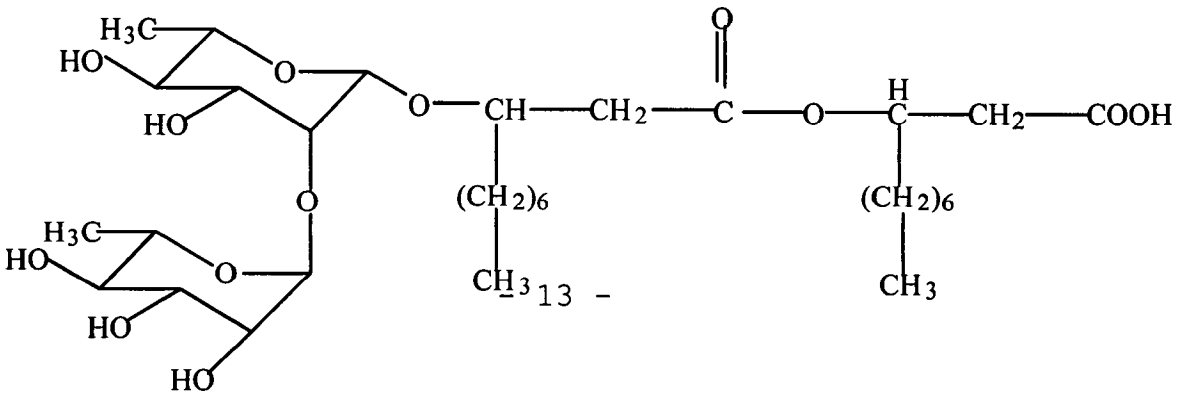
R^3 = -$(CH_2)_x$-CH_3, wherein x = 4-19;

R^4 = -$(CH_2)_y$-CH_3, wherein y = 1-19;

R^5 = $(CH_2)_z$-CH_3, wherein z = 1-12; and

R^6 = lower alkyl.

24. (Original) The method as claimed in claim 23, where said rhamnolipid of Formula I is α-L-rhamnopyranosyl-(1,2)-α-L-rhamnopyranosyl)-3-hydroxydecanoyl-3-hydroxydecanoic acid having the following formula:



25. (Original) The method as claimed in claim 23, wherein said one or more rhamnolipids of Formula I are selected from the group consisting of compounds of Formula 1 wherein:

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -COOH, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH = CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = $(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3;

R^1 = -O-C(=O)-CH = CH-R_5, R^2 = -CHR_4-CH_2 -$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_2$-CH_3, and R^5 = -$(CH_2)_6$-CH_3; and

R^1= α-L-rhamnopyranosyl substituted at the 2-position by -O-C(=O)-CH=CH-R^5, R^2 = -CHR^4-CH_2-$COOCH_3$, R^3 = -$(CH_2)_6$-CH_3, R^4 = -$(CH_2)_6$-CH_3, and R^5 = -$(CH_2)_6$-CH_3.

Claims 26-28 (Canceled)